

---

# Peer training in expert searching: the observation effect

By Dorice L. Vieira  
*Vieira@library.med.nyu.edu*  
Associate Curator  
Coordinator for Search Services

Kathel Dunn  
*Dunn@library.med.nyu.edu*  
Associate Director, Public Services

Ehrman Medical Library  
New York University School of Medicine  
550 First Avenue  
New York, New York 10016

---

**Objectives:** The purpose of this study is to determine if searchers' observing each others' search processes is an effective training method and if sharing through observation can strengthen search skills.

**Method:** A shared email account was established among all public services librarians conducting literature searches at the Ehrman Medical Library. Three questionnaires were sent to the public services librarians soliciting input on the shared-search process. The results were analyzed for this study.

**Results:** The shared-search process has helped searchers become more effective in searching. Colleagues' viewing of the search results is a major factor influencing the searchers' performance.

**Conclusions:** Easy to implement, the peer-training model is an effective way to train searchers as well as help keep skills up to date.

---

## LITERATURE REVIEW

In a 1987 evaluation of qualifications sought by employers in health sciences libraries, Stroyan identified experience or training in online bibliographic searching as requested in 38% of library administration positions and in 86% of reference or information positions [1]. By the late 1990s, clinical librarianship resurfaced in the literature. In preparation for training for clinical rounds, Guise et al. discussed how in-depth training was provided for clinical librarians at the Eskind Biomedical Library. Senior librarians, who were considered expert searchers, were responsible for evaluating the filtering skills of clinical librarians [2]. In 1998, Guise et al. discussed how the Eskind Biomedical Library reorganized its traditional divisions and departments and began focusing on specific projects and initiatives for various areas: clinical medical librarianship, informatics filtering, DIALOG, and digital libraries. The four modules required "expert-level" skills, and training modules were developed as a result [3]. Atlas illustrated that as users have become searchers themselves, the volume of mediated searches has been reduced [4].

The easier searches, author searches, and single-subject searches have been replaced by more demanding

and complex searches, requiring sophisticated search skills and subject knowledge. Thus, the Public Services Department of the Ehrman Medical Library has recognized that continuous training is required to become an expert mediated searcher in the field of health sciences librarianship. The challenge for today's librarian is in maintaining and growing search skills while working on fewer, but more complicated, searches. Whereas practice makes perfect, the librarian today seeks perfection with less practice.

## BACKGROUND

### Institutional setting

The Frederick L. Ehrman Medical Library serves the New York University (NYU) Medical Center, a complex institution consisting of the NYU School of Medicine and two hospitals, Tisch Hospital and the Rusk Institute of Rehabilitation Medicine. Tisch Hospital includes four major treatment and investigative units. The NYU School of Medicine includes the Post-Graduate Medical School, the Skirball Institute of Biomolecular Medicine, Sackler Graduate School in Biomedical Sciences, the Kaplan Comprehensive Cancer Center, the Institute of Environmental Medicine, and the Center for AIDS Research. The NYU Medical Center

is also affiliated with the Hospital for Joint Diseases, NYU Downtown Hospital, and, most notably, Bellevue Hospital, America's oldest public hospital.

### Library setting

The Ehrman Medical Library is a major academic health sciences library. The library serves the information needs of medical and doctoral students, faculty (both clinicians and basic scientists), nurses, and staff throughout the NYU Medical Center, including the dental school. With a staff of sixteen faculty librarians, six librarians are in the public services department and are responsible for mediated searching.

### Search services in the Public Services Department

For over 15 years, the Ehrman Medical Library has conducted mediated literature searches. In contrast to national trends that Atlas tracks as declining [4], the number of mediated searches at the Ehrman Medical Library has increased significantly. Two hundred seventy one requests were received for 2001/02, 345 requests for 2002/03, and 523 requests for 2003/04, representing dramatic increases of 27% and 52%, respectively. Anecdotally, staff attributed the increase to the ease of requesting searches through online forms, long-term relationships established by senior librarians with departments and faculty, and external links from NYU Medical Center departmental sites to the Ehrman Medical Library home page or online forms.

From September 1, 2003, through August 20, 2004, 1,159 questions came to the searchwk email alias. Of these, 502 requests were to request literature searches, and the remaining 657 were primarily to receive general search assistance, to ask reference questions, or to offer suggestions. The top 10 departments requesting searches were medicine (37 requests), psychiatry (34 requests), emergency medicine (26 requests), obstetrics/gynecology (16 requests), nursing (16 requests), school of medicine (14 requests), neurology (12 requests), pediatrics (7 requests), social work (6 requests), and environmental medicine (5 requests). Forty-three additional departments requested 4 or fewer searches during this time period. The literature searches conducted for clinical conferences were excluded from this set as they did not come through the searchwk email alias.

The public services librarians use a shared email search service to answer all inquiries from faculty, nurses, students, and staff. Each week, one librarian is assigned to handle requests. The service is called "Searcher of the Week." All mediated search requests are sent to an email alias, "searchwk," received by the group of librarian searchers and other public services staff. All responses are copied to the group. The searchers know that their answers are seen, received, and accepted first by the requestor but second—and no less important—by their colleagues. The effects of being observed with occasional collegial intervention and the need to set an example for nonlibrarians together produce a powerful influence on the searchers

and their work. As new librarians and veteran reference librarians struggle to keep abreast of the growing numbers of health sciences databases while maintaining high-quality search techniques, the power of observation through email serves to facilitate training among all mediated searchers.

The searchwk email alias has been in effect since October 1999. The library's Website includes several Web forms: Literature Search Request, Ask A Librarian, Need Search Assistance? Ask A Medical Librarian (a link in the library's Ovid databases), and Suggestions. All are directed to the searchwk alias. An automatic email response stating that the patron's question will be responded to within three to five business days is generated and sent to the patron's email.

The primary group in the alias is composed of six public services librarians. Searching experience ranges from three to twenty-three years, with an average of fourteen years. Searchers are considered "veteran searchers" if they have ten or more years of searching experience. Three members of the group have fewer than ten years of experience.

The secondary group in the searchwk alias consists of the managers of document delivery and circulation, as well as the library managers at the four affiliated branch libraries. Thus, managers can keep abreast of the questions and learn essential information relating to their respective areas. Although they do not conduct mediated searches, the library managers benefit by seeing how a search should be conducted.

One librarian is assigned to answer all search requests that are received in a week. The answers are most frequently returned to the user via email, and the group of searchers is copied. When the patron requests a print copy of the results, the request is honored, but the results are still sent to the searchwk alias with a brief note. Thus, all searchers have the opportunity to read every request and answer. In addition, the search services coordinator or other colleagues can, and have, intervened to correct a colleague's answer as it impacts policy, to complete the answer, or to suggest additional approaches.

The library does not have a stated policy on confidentiality beyond the Health Insurance Portability and Accountability Act (HIPAA) policy followed by the medical center. The librarians and staff in essence have a shared practice, where all take responsibility for providing answers and for providing service. In a shared practice, especially with all answers and questions visible, a requestor who might start with a visit to the information desk, then progress to an email inquiry, can be followed—and followed up on—by a group of librarians rather than just one. More than once, a librarian has provided his or her colleague with additional information on a user's request based on similar work done for the same person.

The hypothesis of this paper is that the knowledge that one's work will potentially be read by one's colleagues influences the format and approach to the answer.

## METHODOLOGY

The six public services librarians answered a series of three surveys in the spring of 2004. The first survey (Appendix A) was sent by email in April 2004 and focused on giving and receiving advice between and among colleagues. The second survey (Appendix B) was also sent by email in April 2004 and followed up on the answers to the first survey by focusing questions on the effect of being observed. The purpose was to determine if being observed affected the librarians' searching habits, either in database selection, search strategy, or other ways. The third survey (Appendix C), sent by email in June 2004, filled in some gaps from the previous surveys, asking for more detailed information on the librarians' training history. The advantage of using a series of surveys was that new questions could be asked, building on the previous answers or gaps in the answers. Both authors reviewed the answers from all three surveys, compiling and tabulating the responses.

## RESULTS

Each of the librarians reported seeking advice from colleagues, with four out of six seeking advice five or more times. Of the four, three are veteran librarians. All librarians have given advice, with the veterans typically offering more advice, at least five or more times. Five out of the six librarians agreed that peer advice helped with their searching.

The majority of the librarians reported learning how to search on the job with little formal training. In the case of two of the six librarians, their searches were formally reviewed when new to the job. The other four librarians reported having only had sample searches reviewed.

A majority of the librarians (five out of six) responded that the presence of colleagues sometimes influenced how they responded to a question. All agreed that they responded as if "the answer is seen by both the requestor and colleagues." Even when not assigned to be the "searcher of the week," all of the librarians tried to look at the searches coming in and the responses going out. The effect of being observed influenced the responses in a number of ways: the need to set an example, awareness that the supervisor and/or search coordinator might comment on the search strategy, and colleagues' expectations.

Five searchers sought assistance on search strategy, two on database selection, one on evidence-based medicine methodologies and filtering, and two on subject expertise. All sought a second opinion, and one needed validation of search strategy due to the nature of the database. Five out of six retained colleagues' strategies for teaching examples, possible reuse, keeping up, and search technique. The search coordinator was the only one who kept searches for statistical purposes and as a part of job responsibility.

Some of the librarians' comments on the shared aspect of the searching process are:

Because expertise in various areas differs among searchers, I appreciate and learn from other searches. To gain one or two tips along the way helps me and reminds me of sources or techniques I might have forgotten or overlooked.

Because I know that my search responses (answers) are being viewed by other librarians (and now library managers), I am conscious of being more explicit and thorough in some of my answers—as if I were explaining not just to the user but to my colleagues.

I typically save responses using particularly good/new/interesting strategies for future reference. This "archival" aspect of searchwk helps as our shifts are weeks apart. It provides a useful ongoing reference.

I have also pressed on in my searching, not wanting to tell a user that I couldn't find something "in front of" my colleagues. In one case that I can think of, this changed my search results.

It is a very useful way to check if there are any special problems to note, so we can be alert to something that may affect other users, plus we have a great window on what our users are asking us.

In addition to the searchwk alias, searchers listed the following methods for keeping up their database knowledge:

- professional reading
- email from publishers and the National Library of Medicine
- reading the help screens and vendor documentation
- practice
- consultation with colleagues
- class preparation
- product updates, especially at professional conferences
- search clinics (in-service training)

Finally, all agreed that given the choice, they would prefer to have colleagues see their searches.

## DISCUSSION

Searching is a skill that requires continual honing, updating, and refreshing. It takes more than continuing education to make an expert searcher. Expertise is the synthesis of ability and knowledge and not knowledge alone. The *Oxford English Dictionary* defines "expert" as:

1. Experienced (*in*), having experience (*of*).
2. Trained by experience or practice, skilled, skilful [5].

While formal training is valuable, the critical element in searching is the experience: the actual literature search preferably coupled with feedback from both the user and one's colleagues. User comments and feedback are critical because they come from clients. They are the arbiters of the search results. Numerous studies have been conducted on client feedback in the search process.

Collegial feedback is another element in the search process. Colleagues know the standards in the searching field, possible missing information in a search from a database, search-term selection, and format of search results. Colleagues also know the tricks of the trade, how best to manipulate a database to achieve optimal results.

One weakness of the study was that the surveys were administered in a transparent environment. Staff members all knew who asked the questions and who answered. The librarians might have had a desire to present themselves in a good light to a supervisor or coordinator of search services. The honesty of the answers, where nearly all indicated asking for assistance, was a sign that the surveys accurately represented the searching and search process for this group of librarians.

## CONCLUSION

The convenience of a learning opportunity that is timely, falling naturally in the course of a librarian's daily work and learning, and that is highly relevant and not artificially manufactured is essential to the adult learner. A transparent observable and communal email search system provides an ongoing work and training program.

Though not initially intended as a training program, the transparent search services program has resulted in a peer-to-peer educational tool. Learning takes place through observation of others' searching and by conducting searches knowing that other experts are observing the search results. Though additional didactic training takes place in bimonthly searching grand rounds, in vendor training, and through self-directed reading, the effects of the observed-apprentice model can be profound. Each week the roles of the expert and apprentice or teacher and learner are exchanged for a continuous learning process.

## REFERENCES

1. STROYAN S. Qualifications sought by employers of health sciences librarians, 1986. *Bull Med Libr Assoc* 1987 Jul;75(3):209-13.
2. GUISE NB, KAFANTARIS SR, HUBER JT, LYNCH F, EPELBAUM M, PFEIFFER J. Developing a culture of lifelong learning in a library environment. *Bull Med Libr Assoc* 1999 Jan;87(1):26-36.
3. GUISE NB, KAFANTARIS SR, MILLER MD, WILDER KS, MARTIN SL, SATHE NA, CAMPBELL JD. Clinical medical librarianship: the Vanderbilt experience. *Bull Med Libr Assoc* 1998 Jul;86(3):412-6.
4. ATLAS MC. The rise and fall of the medical mediated searcher. *Bull Med Libr Assoc* 2000 Jan;88(1):26-35.
5. Oxford English dictionary (online). Oxford, UK: Oxford University Press, 2004.

*Received May 2004; accepted August 2004*

## APPENDIX A

### Role of the expert searcher: searcher of the week survey (April 2004)

Circle the most appropriate answer.

1. From September 2003 through March 2004, approximately how many times did you seek searching advice from a search services colleague?
  - a. 0
  - b. 1-2
  - c. 3-5
  - d. 5 or more

2. From September 2003 through March 2004, approximately how many times did you offer advice to a search services colleague?
  - a. 0
  - b. 1-2
  - c. 3-5
  - d. 5 or more

3. Does having the opportunity to view the responses submitted to searchwk assist you in answering questions more efficiently?
  - a. Yes
  - b. No

If no, why not (check all that apply).

\_\_\_ Too many messages

\_\_\_ No time to read

\_\_\_ I feel I keep up with policies & procedures and, therefore, it is not necessary to review

Other: \_\_\_\_\_

Comments: Please give your comments regarding the usefulness of searchwk email service for keeping up and helping others to keep up. \_\_\_\_\_

## APPENDIX B

### Role of the expert searcher survey: additional questions (April 2004)

1. When you write your response to a search question, do you write the response as if (circle appropriate answer)

- a. The answer is only seen by the requestor (ignoring one's colleagues who are cc'ed on the response).
- b. The answer is seen by both requestor and colleagues (taking into account that one's colleagues will be viewing the answer as well).

2. When you are not "searcher of the week," do you look at the questions and answers coming in via email? (circle appropriate answer)

- a. Questions: never
- b. Questions: sometimes
- c. Questions: always
- d. Answers: never
- e. Answers: sometimes
- f. Answers: always
- g. Questions and answers: never
- h. Questions and answers: sometimes
- i. Questions and answers: always

3. Has the presence of your colleagues—in the form of the cc'ed response—influenced how you respond to a question? (circle appropriate answer)

- a. Never
- b. Rarely
- c. Sometimes
- d. Frequently
- e. Always

4. If the presence of your colleagues—in the form of the cc'ed response—influenced how you responded to a question, in what way?

- a. I am aware of the need to set an example in my questions and answers.
- b. I am aware that my supervisor or the coordinator of search services will comment on my answer if it is not clear or not fully answered.
- c. I have chosen an additional or other database, because I know that my colleagues would expect to see it searched.
- d. I have sought assistance from a colleague regarding (circle appropriate answer):
  - i. Search strategy
  - ii. Database selection
  - iii. Evidence-based medicine methodologies or filtering
  - iv. Subject expertise
  - v. Second opinion or comprehensiveness of search
  - vi. Validation of search strategy as a result of database selection
5. Have you kept or retained a colleague's search strategies and results?
  - a. Yes
  - b. No
6. If yes, why?
  - a. Teaching examples
  - b. Possible reuse
  - c. Keeping up
  - d. Search technique
  - e. Statistical purposes
  - f. Part of job responsibility
7. How do you keep up your knowledge of databases and search strategy? \_\_\_\_\_

8. Given a choice, would you prefer not to have your colleagues view your search results?

- a. Yes
- b. No

If yes, why? \_\_\_\_\_

9. When did you obtain your library degree? \_\_\_\_\_

10. How long have you been conducting online mediated searching? \_\_\_\_\_

## APPENDIX C

### Role of the expert searcher survey: additional questions, literature searching-training (June 2004)

1. How were you trained to search databases?
  - a. In library school
  - b. In a formal on-the-job training program
  - c. In an informal on-the-job training program
  - d. Combination of some or all but really on my own
 Comments: \_\_\_\_\_
2. When you were being trained, did anyone review your searches?
  - a. Yes, training (sample searches) only
  - b. No, my work was never reviewed
  - c. Other
 Comments: \_\_\_\_\_